

## TENT COOPERATION TRE, Y

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

Date of mailing (day/month/year) 08 June 1999 (08.06.99)
Applicant's or agent's file reference 45300-52777
International application No. PCT/SE98/01675

From the INTERNATIONAL BUREAU

To:

BERG, Sven, Anders  
Albihns Patentbyrå Stockholm AB  
P.O. Box 5581  
S-114 85 Stockholm  
SUEDE

## IMPORTANT NOTIFICATION

International filing date (day/month/year) 18 September 1998 (18.09.98)
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## 1. The following indications appeared on record concerning:

the applicant  the inventor  the agent  the common representative

Name and Address BERG, Sven, Anders Albihns Patentbyrå Stockholm AB P.O. Box 3137 S-103 62 Stockholm Sweden	State of Nationality	State of Residence
	Telephone No.	
	46 8 4027200	
	Facsimile No.	
	46 8 101923	
	Teleprinter No.	

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

the person  the name  the address  the nationality  the residence

Name and Address BERG, Sven, Anders Albihns Patentbyrå Stockholm AB P.O. Box 5581 S-114 85 Stockholm Sweden	State of Nationality	State of Residence
	Telephone No.	
	46 8 59 88 72 00	
	Facsimile No.	
	46 8 59 88 73 00	
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## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Aino Metcalfe Telephone No.: (41-22) 338.83.38
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## PENT COOPERATION TRE, Y

From the INTERNATIONAL BUREAU

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

Date of mailing (day/month/year)
08 June 1999 (08.06.99)

To:
United States Patent and Trademark Office (Box PCT) Crystal Plaza 2 Washington, DC 20231 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

International application No.
PCT/SE98/01675

Applicant's or agent's file reference
45300-52777

International filing date (day/month/year)
18 September 1998 (18.09.98)

Priority date (day/month/year)
19 September 1997 (19.09.97)

Applicant
WAHLGREN, Mats et al

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

19 April 1999 (19.04.99)

in a notice effecting later election filed with the International Bureau on:

\_\_\_\_\_

2. The election  was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer
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Aino Metcalfe

Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 11 OCT 1999

WIPO

PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 45300-52777-AKR	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE98/01675	International filing date (day/month/year) 18.09.1998	Priority date (day/month/year) 19.09.1997
International Patent Classification (IPC) or national classification and IPC6 C 07 K 14/445, A 61 K 38/17		
Applicant Karolinska Innovations AB et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.
3. This report contains indications relating to the following items:
  - I  Basis of the report
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand 19.04.1999	Date of completion of this report 21.09.1999	
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Telex 17978 PATOREG-S	Authorized officer Carolina Gómez Lagerlöf/EÖ Telephone No. 08-782 25 00

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE98/01675

## I. Basis of the report

1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):

the international application as originally filed.

the description, pages \_\_\_\_\_, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the claims, Nos. \_\_\_\_\_, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the drawings, sheets/fig \_\_\_\_\_, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/fig \_\_\_\_\_

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE98/01675

**III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

the entire international application,  
 claims Nos. 11-12, 25-26, 30-32

because:

the said international application, or the said claims Nos. 11-12, 25-26, 30-32  
relate to the following subject matter which does not require an international preliminary examination (specify):

See PCT Rule 67.1.(iv).: Methods for treatment of the human or animal body by surgery or therapy, as well as diagnostic methods.

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*): \_\_\_\_\_

the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

no international search report has been established for said claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE98/01675

**V. Resoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	<u>1-10, 13-24, 27-29</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-10, 13-24, 27-29</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-10, 13-24, 27-29</u>	YES
	Claims	_____	NO

**2. Citations and explanations**

The claims disclose carbohydrates capable of binding to a malaria erythrocyte membrane protein and which comprise negatively charged glycosaminoglycan-like moieties. The claims further disclose a polypeptide originated from malaria erythrocyte membrane protein and its use.

During the search the following documents were found:

- A WO 9640766
- B WO 9633736
- C Am. J. Trop. Med. Hyg., 51(2), 1994, 198-203
- D WO 9630026

Document A discloses polypeptides derived from the binding domains of the proteins of the DBL family and their use in a preparation of a medicament for inducing a protective immune response to *Plasmodium* merozoites in a mammal. The polypeptides are not the same as the claimed polypeptides.

Document B relates to PfEMP1 proteins and fragments thereof, but these variants are not the same as the claimed variants of PfEMP1.

Document C shows that sulphated glycoconjugates disrupts *Plasmodium Falciparum* erythrocyte rosettes. However, it is not shown that these glycoconjugates binds specific to a malaria erythrocyte membrane protein.

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE98/01675

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

Document D discloses a pharmaceutical composition containing chondroitin 4-sulphate that is capable of binding to erythrocytes infected with *Plasmodium Falciparum*. It is not specified which erythrocyte membrane protein chondroitin 4-sulphate is binding to.

The documents mentioned above show the general state of the art.

Claims 1-10, 13-24 and 27-29 are considered to fulfil the requirements of novelty, inventive step and industrial applicability.